



# **2007 IEPR Hearings Chapter 8 – Land Use**

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California Energy Commission Staff

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## Scope of Chapter 8

- Impact of Land Use in Energy and GHG Emissions
- Tax Policy Impact
- Local and Regional Government Roles
- Blueprint Planning
- (Limited) Role of State
- Other State's and Utilities
- Research
- Recommendations



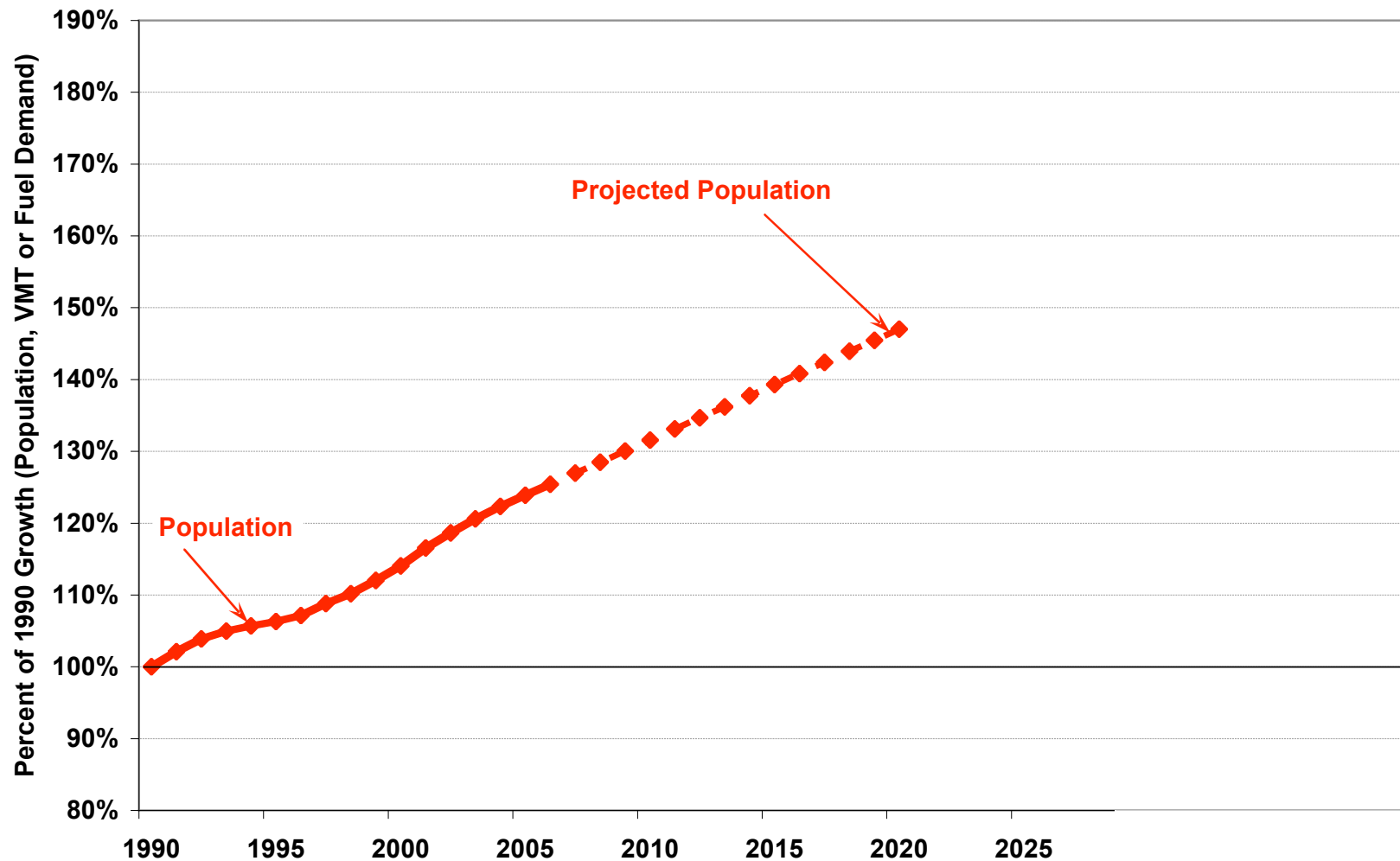
## Impact of Land Use in Energy and GHG Emissions

- Vehicle miles traveled (VMT) are increasing at an annual rate of 3% and are responsible for 27% of the State's GHG emissions
- Land use plays a direct role in rate and growth on VMT
- Density of communities seem to have largest impact on VMT and vehicle trip choice
- Accessibility, mix of uses and distance to transit have significant impact on VMT



## California Energy Commission

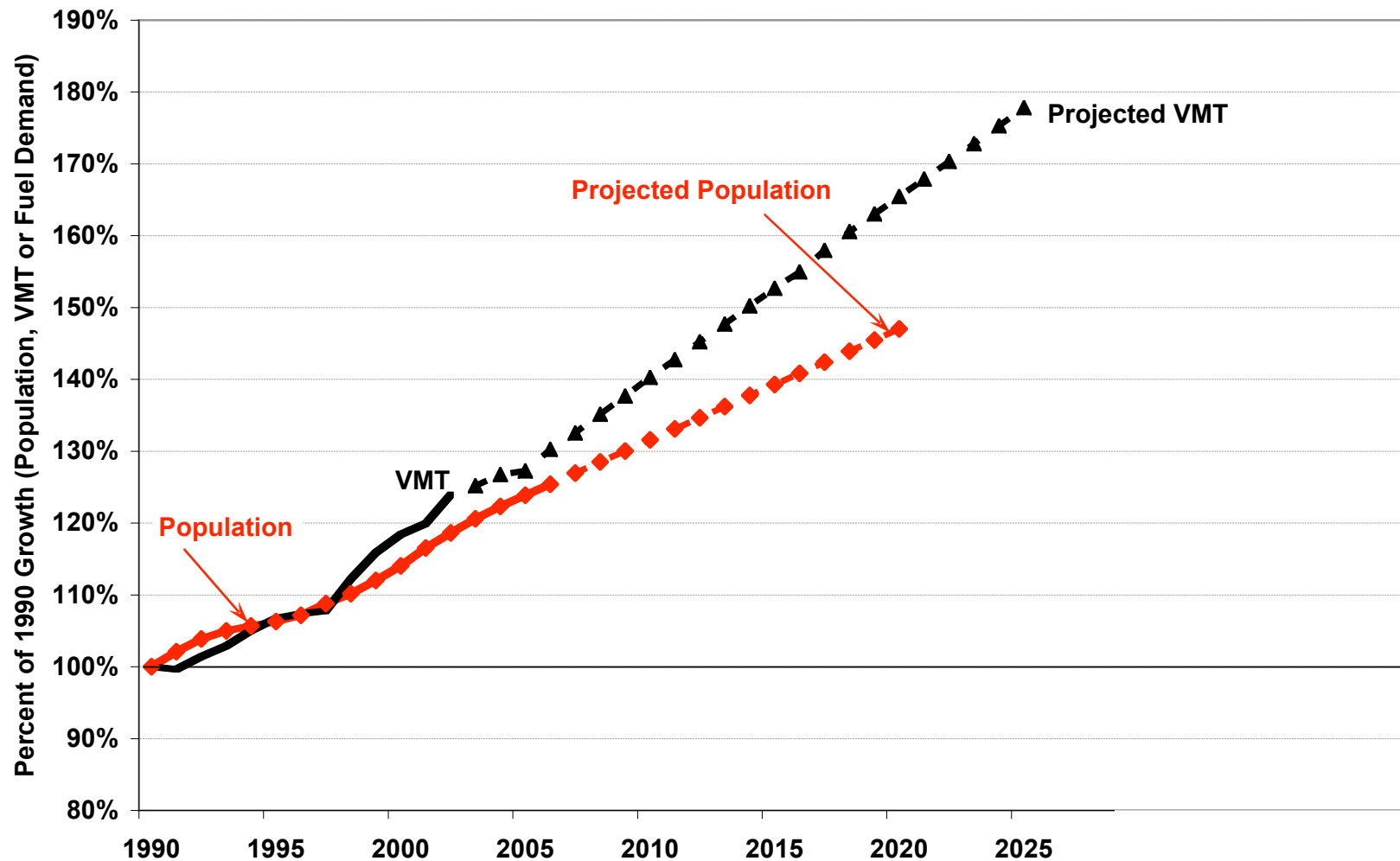
Historical and Projected Population, VMT and Fuel Demand, with and without AB 1493 and including Low Carbon Fuel Standard (all values scaled to 100% in 1990)





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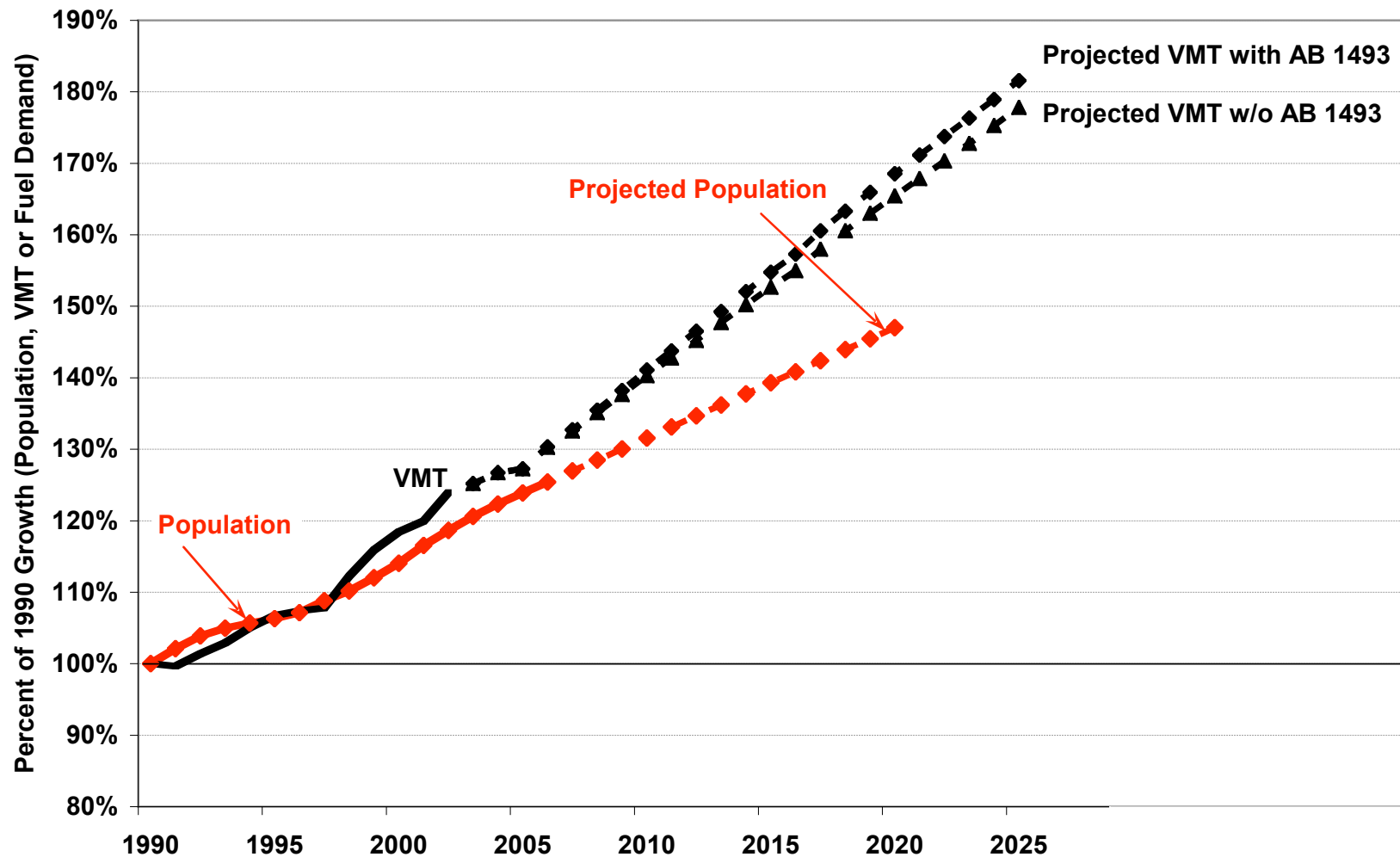
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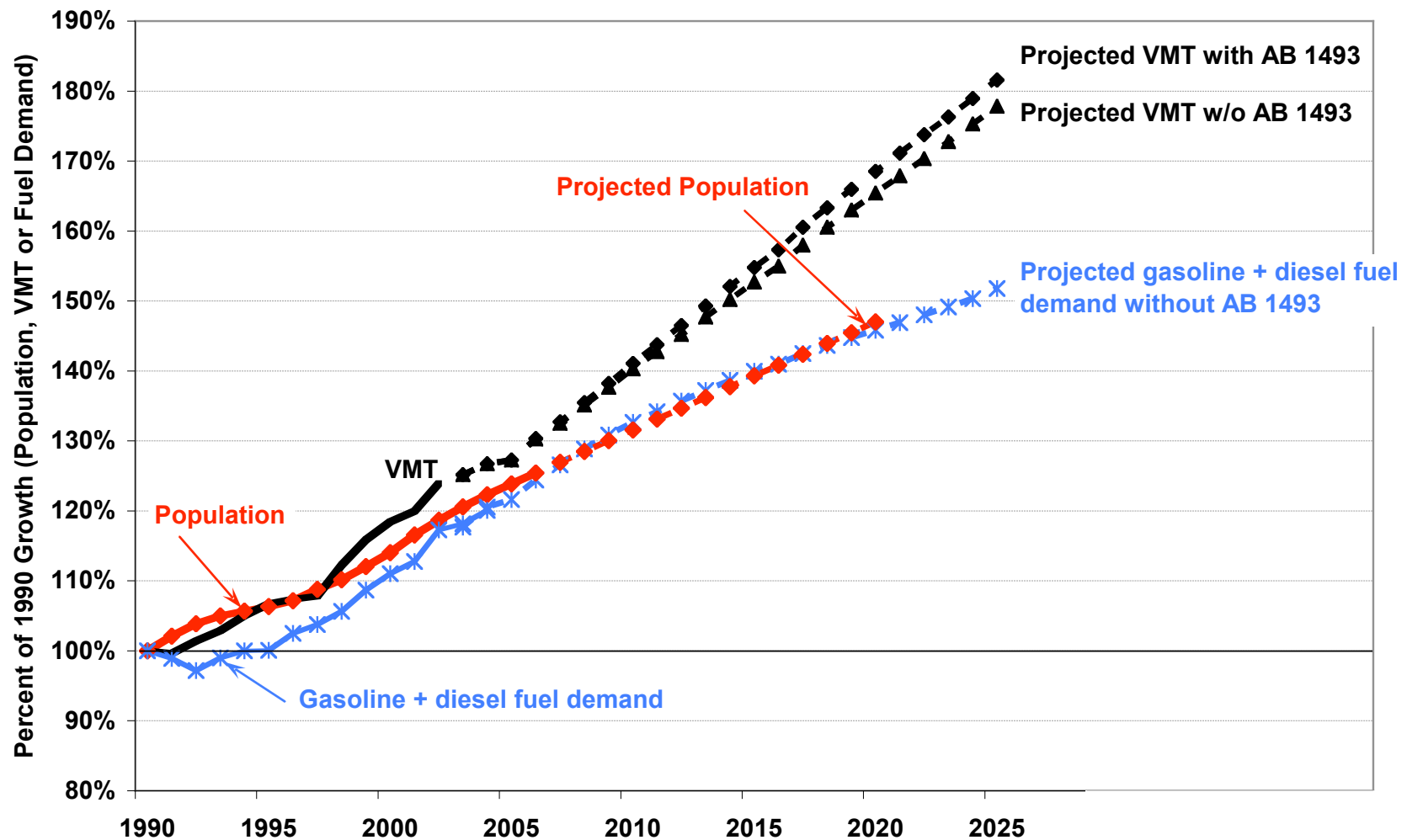
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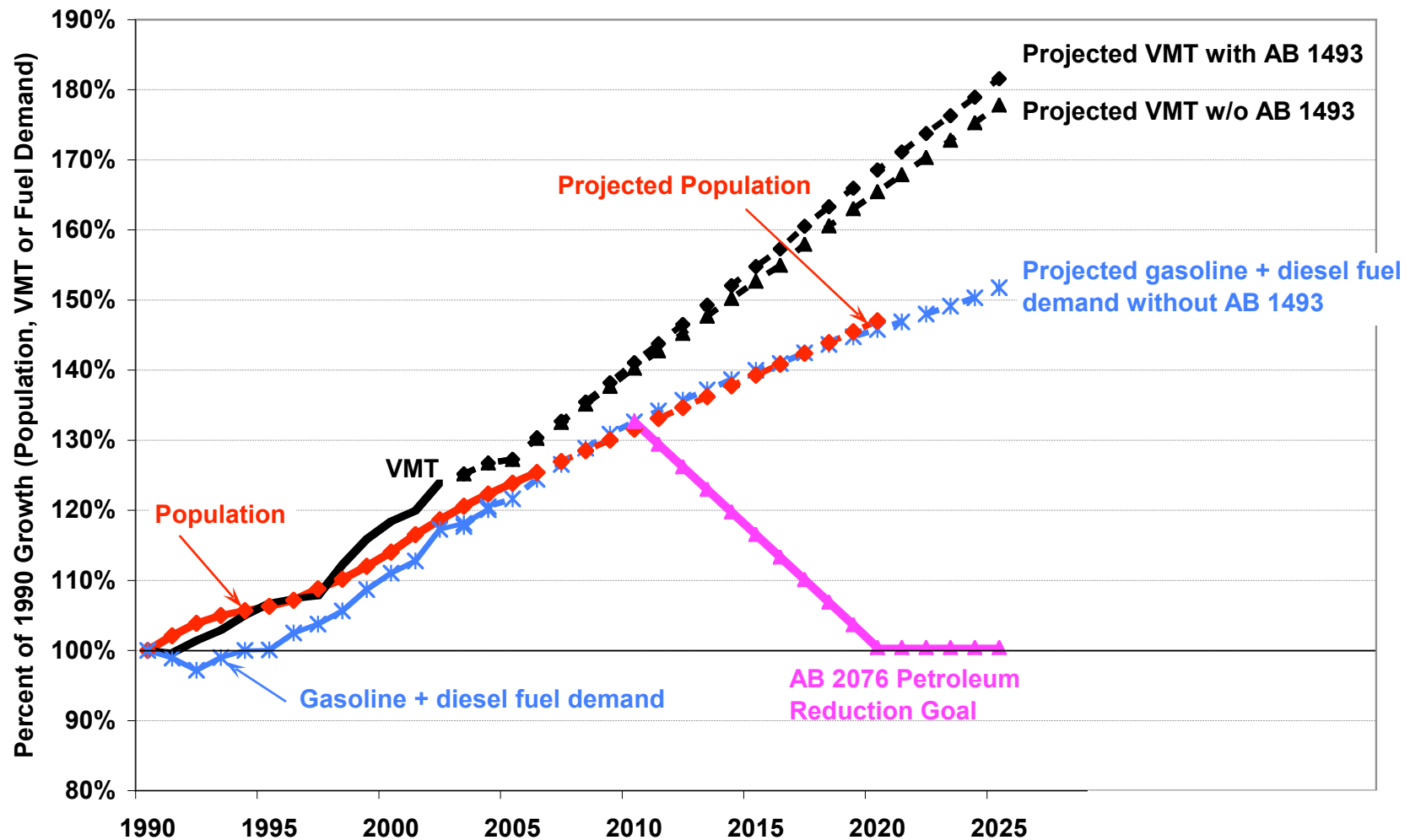
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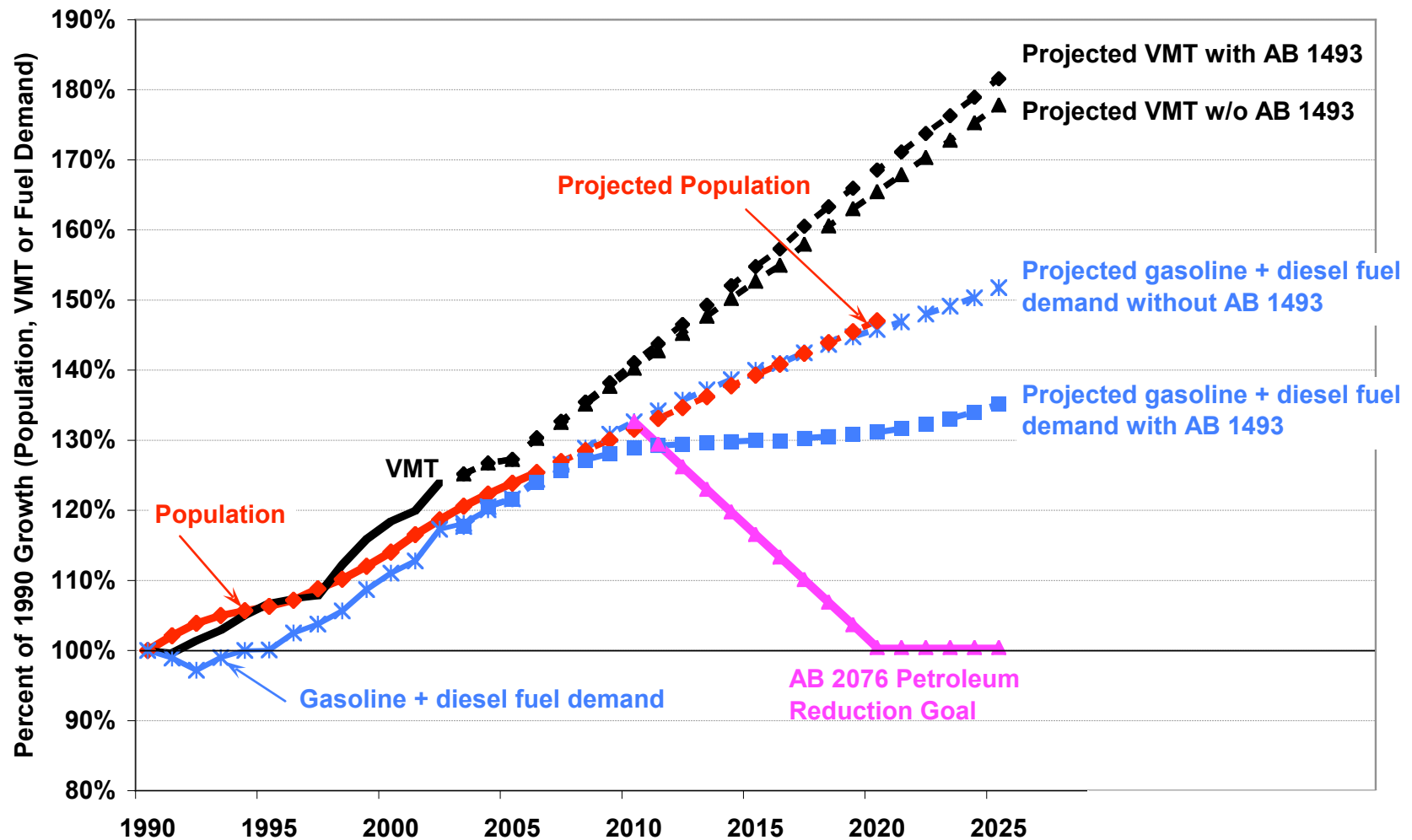
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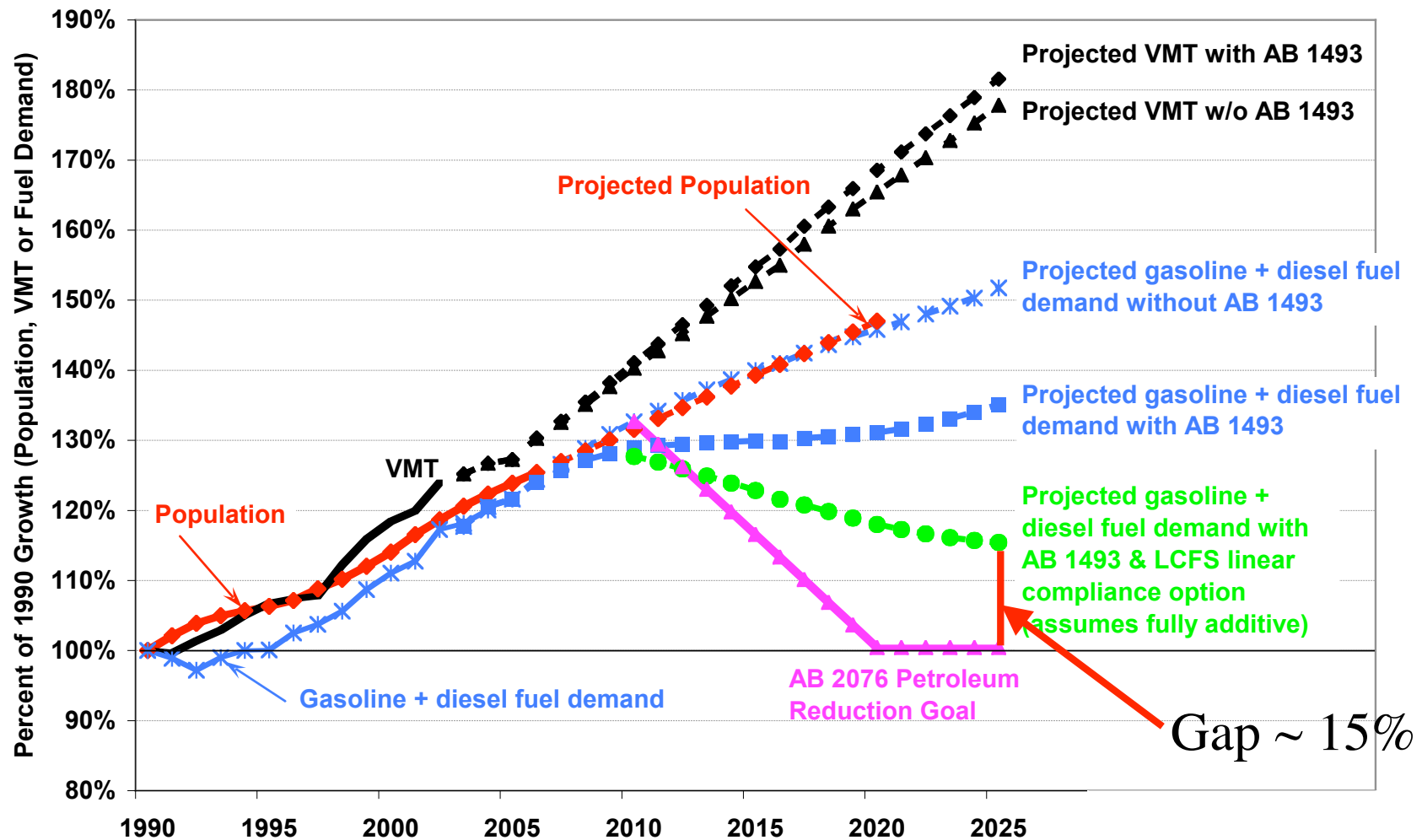
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Historical and Projected Population, VMT and Fuel Demand, with and without AB 1493 and including Low Carbon Fuel Standard (all values scaled to 100% in 1990)





## California Energy Commission





California Energy Commission

# California's State Flower





# Sprawl

Ewing and Cervero, 2001:

- a population widely dispersed in low density residential development;
- a rigid separation of homes, shops, and workplaces;
- a lack of distinct, thriving activity centers, such as strong downtowns or suburban town centers;
- a network of roads marked by very large block size and poor access from one place to another.



## Sprawl

Ewing and Cervero, 2001:

- Studied 83 largest metropolitan areas
- 5 factors (“Five D’s”):
  - Density,
  - Diversity,
  - Design
  - Destination accessibility
  - Distance to transit.



## Sprawl

Ewing and Cervero, 2001:

- Density may have the most significant relationship to travel and transportation outcomes, doubling density led to 5% reduction in VMT .
- Difference between low and high density U.S. metropolitan areas is more than 40 percent daily per capita VMT
- Overall VMT and VT declined as accessibility, density, and/or land-use mixing increased.



## Tax Policy

- Proposition 13 transformed local government finance, leading to greater reliance on sales tax revenue
- Property tax has become a less significant revenue stream
- This had led many local governments to pursue tax revenue producing commercial development rather than residential





## Role of Local Governments

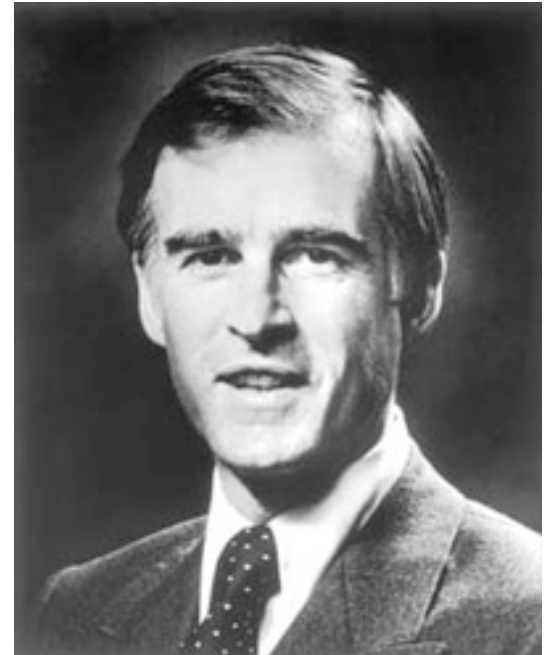


- Land use authority is vested in local governments in CA, guided by general plans
- Currently no explicit requirement for local governments to address energy or GHG emissions in general plans
- Only 10% of local governments have Energy elements in their general plans



## California Environmental Quality Act (CEQA)

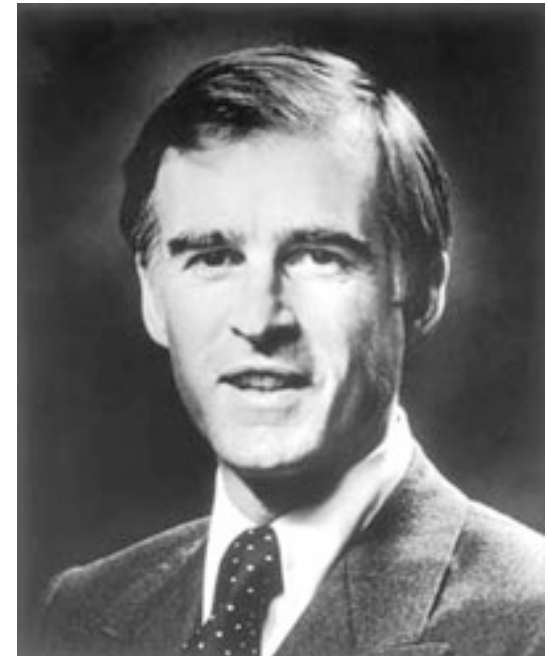
- CEQA requires state and local agencies to identify and reduce significant, negative environmental impacts of land use decisions.





## San Bernardino Settlement

- An inventory of all known, or reasonably discoverable, sources of greenhouse gases in the County.
- An inventory of the greenhouse gas emissions level in 1990, currently, and that projected for the year 2020.
- A target for the reduction of emissions attributable to the county's discretionary land use decisions and its own internal government operations.





## **SB 97, Statutes of 2007**

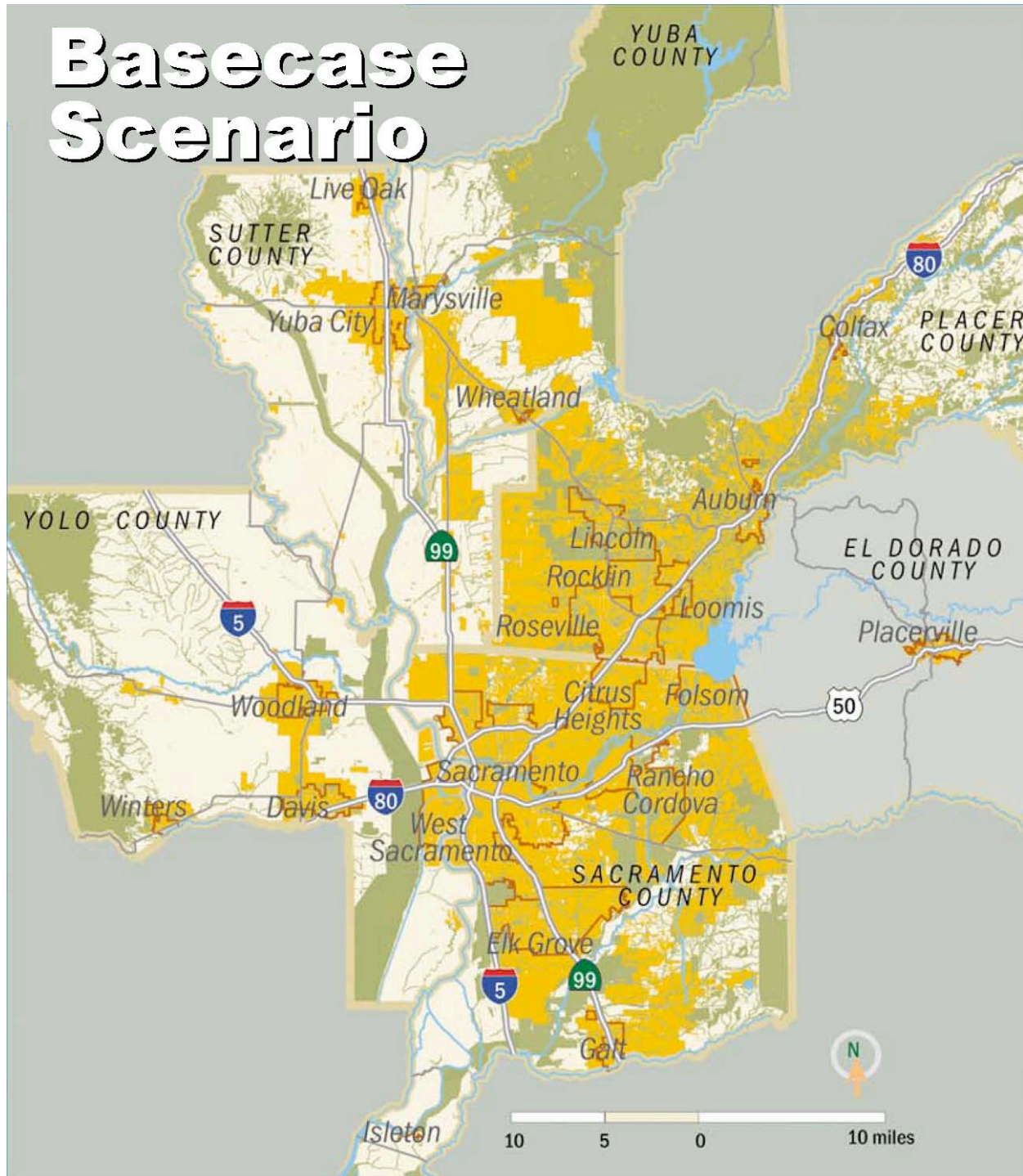
- OPR, by July 1, 2009, to prepare... guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions... including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency would be required to certify and adopt those guidelines by January 1, 2010.



## Role of Regional Governments

- Congestion, housing, economic development, GHG emission mitigation require regional approaches
- California Blueprint Planning Program has led to nearly all of the State's metropolitan transportation organizations adopting Blueprint plans to accommodate future growth in a responsible manner
- Blueprints good, but need implementation support

# Basecase Scenario

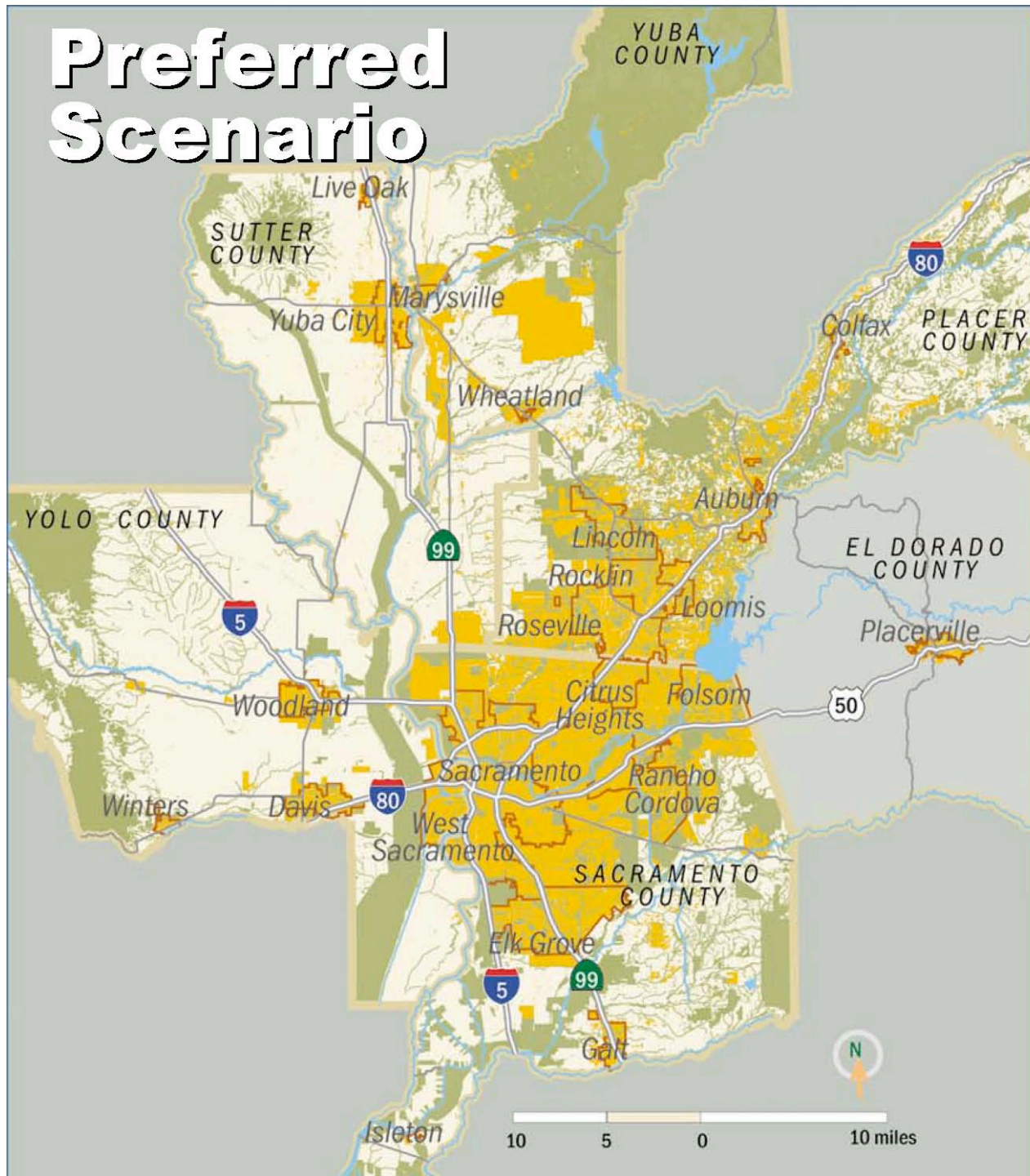


## SACRAMENTO REGION Blueprint TRANSPORTATION/LAND USE STUDY

### Key to the Map

- areas of existing and future development
- green areas (e.g. open space, parks, wetlands, vernal pools, stream corridors, hardwood stands)
- agriculture and other undeveloped lands
- rivers, streams and lakes
- city boundaries
- highways
- county boundaries

# Preferred Scenario



## SACRAMENTO REGION Blueprint TRANSPORTATION/LAND USE STUDY

### Key to the Map

- areas of existing and future development
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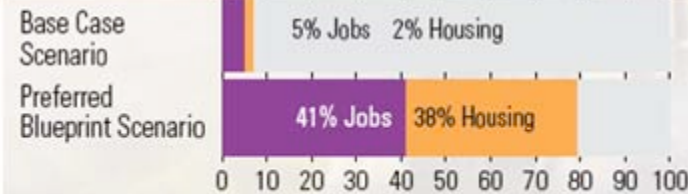
# California Energy Commission

## ALL HOUSING TYPES

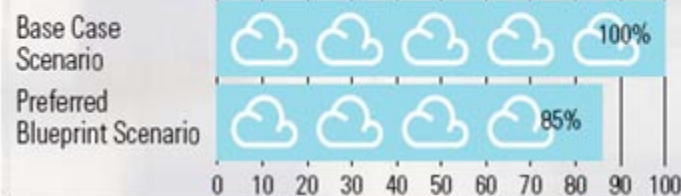


## GROWTH NEAR TRANSIT

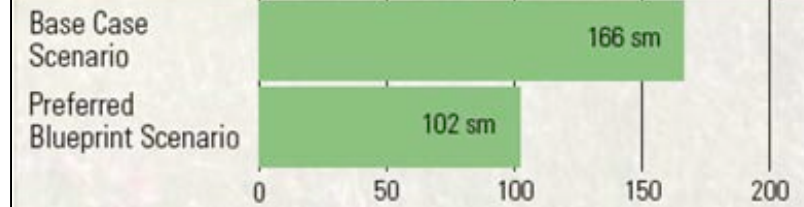
Within walking distance of 15-minute or better transit service



## PER CAPITA CARBON DIOXIDE AND SMALL PARTICULATES EMISSIONS

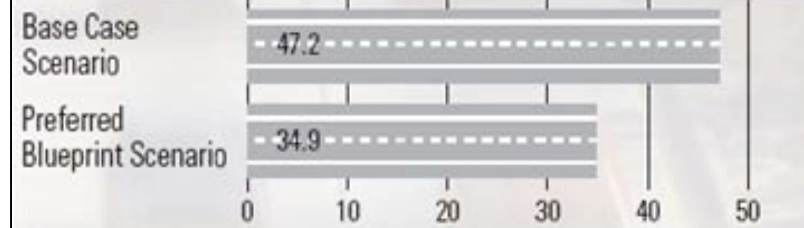


## AGRICULTURAL LAND CONVERTED TO URBAN USES



## VEHICLE MILES TRAVELED

(per household per day)



## PEOPLE LIVING IN AREAS WITH GOOD MIX OF JOBS AND HOUSING





## **(Limited) Role of the State**

- State has limited authority, but key leverage points (CEQA, housing elements, stormwater plans)
- AB 857 (Wiggins, Statutes of 2002) requires State agencies to practice smart growth, no recourse for agencies that don't
- Infrastructure bond funds could be strong leverage point for State to encourage smart growth



## Other States

- Oregon, Maryland and New Jersey's smart growth policies highlighted





# Utilities

- Utilities starting to play a larger role in local government planning efforts
- Restricted by current efficiency program requirements





### Research

- Research is needed to quantify impacts of different land use decisions
- Lack of tools and funding is leading complaint from local governments trying to implement smart growth
- The Commission will start a Sustainable Communities research program, providing over \$2 million annually





## Recommendations

1. State should require **regional growth management plans** that meet GHG emission, housing, transportation and economic development targets
2. The State should develop a **State Growth Management Plan**, made up of the regional plans, and shift resources to support compliant growth



## Recommendations Cont.

3. Legislation should require all current and future **infrastructure bond programs incorporate climate and energy** considerations
4. The State should expand efforts to **provide technical and financial assistance** to regional and local governments



## Recommendations Cont.

5. **State government should be a model** for climate friendly and energy efficient development
6. The State should study and then **correct the perverse sprawl incentives** in the California tax code
7. The CPUC should allow for program flexibility to allow **utilities to play a larger role in land use planning.**



**Thank You!**

